

## LAS1-A Pushbutton Switch

### Characteristic

LAS1-A series products have complete range, wide market application, some products have three types of head shape: round, square and rectangular (see details from content page) the structure is used by multi-series products of our company's products, is well received by users. The P(W) type pushbutton and signal light use veneering installation, the front frame is only 2mm higher over panel, is fashionable and goodlooking.

**Specs** Including pushbutton, signal light, emergency-stop switch, key-lock switch, selector switch and mushroom switch; mounting hole diameter is  $\Phi 16\text{mm}$ ,  $\Phi 22\text{mm}$ ,  $21 \times 21\text{mm}$  (square) and  $21 \times 27\text{mm}$  (rectangular).

**Performance** Stable function, low contact resistance, strong insulation resistance and anti-vibration etc. Meet the standards of IEC60947-5-1, GB/T14048.5 etc.

**Structure** The switch element is "fast-motion". Each element contains 1NO+1NC contacts, each pushbutton could use 2 pcs elements at most.

**Protective Degree** The standard is IP40, some can be customized for IP65.



### Switch Ratings

Rated Insulation Voltage Ui			250V			
Thermal Current Ith			5A Temperature rise can't over the Max. rating current			
Rated Voltage			12V	24V	110V	220V
Rated Current	AC 50/60Hz	Resistive Load	—	—	1A	0.5A
		Inductive Load	—	—	0.7A	0.5A
	DC	Resistive Load	1A	1A	0.2A	—
		Inductive Load	0.7A	0.7A	0.1A	—
Contact Material			Silver Alloy			

Minimum load: 3VAC/DC 5mA (use range depend on operation environment and load type)

### Installation Dimension

Type	A	B
Round	$\geq 18\text{mm}$	$\geq 18\text{mm}$
Square	$\geq 18\text{mm}$	$\geq 18\text{mm}$
Rectangular	$\geq 18\text{mm}$	$\geq 24\text{mm}$
Mushroom	$\geq 24\text{mm}$	$\geq 24\text{mm}$
Big Square	$\geq 24\text{mm}$	$\geq 24\text{mm}$
Big Rectangular	$\geq 18\text{mm}$	$\geq 24\text{mm}$

### Bottom Preview and Terminal Arrangement

Bottom Preview	Terminal Arrangement

### Specification

Operating Temperature	-25°C~+55°C (no freezing) Keep good ventilation round the switch.	
Operating Humidity	45~85%RH (no condensation)	
Contact Resistance	$\leq 50\text{m}\Omega$	
Insulation Resistance	$> 100\text{M}\Omega$ (500VDC)	
Rated insulation Voltage	250VAC/DC	
Dielectric Strength	Between contact and LED terminals	2000VAC, 50Hz, 1 min
	Between terminals of the same pole	1500VAC, 50Hz, 1 min
	Between terminals of different poles	2000VAC, 50Hz, 1 min
Vibration Resistance	50Hz, amplitude 1.2mm	
Mechanical Life	Momentary Pushbutton	1,000,000 times
	Latching Pushbutton, Selector Switch	500,000 times
	Key-lock Switch	200,000 times
Electrical Life	50,000 times	
Wiring	Diameter of wire	$2 \times 0.8\text{mm}$ max
	Area of copper wire	$0.75\text{mm}^2$
	Pin Terminal	$2.8 \times 0.5\text{mm}$
Solder Heat Resistance	$320^\circ\text{C}$ 3s	
Operating Travel	About 3mm	
Operating Force	About 1.7N (1NO1NC) / About 3N (2NO2NC)	

### Lamp Ratings

LED Life	Current	Allowable Voltage Fluctuation Range	Circuit Diagram
$\geq 40000$ hours	$\leq 24\text{V}$ about 15mA $\geq 110\text{V}$ about 2mA	DC: $\pm 10\%$ AC: $\pm 20\%$	<p>Use internal resistor and no distinction between positive and negative poles.</p>










## LAS1-A Pushbutton Switch

### LAS1-A Series Part Number Description

Button, signal lamp type description: LAS1-A ☆ ★ □ ■ ○ / △ / ▲ / ※

Symbol	Symbol Name	Specify
☆	Sort Code	P: standard frame (Φ22mm) / W: silvery frame(Φ22mm) / no letter means ordinary type
★	Head Shape	Y: round / F: square / J: rectangular / DF: big square(only ordinary type) / DJ: big rectangular(only ordinary type)
□	Contact	11:1NO1NC / 22:2NO2NC / no letter means signal light
■	Operation Type	DS: short-body signal light / D:signal light / Z: latching pushbutton / no letter means momentary pushbutton
○	Illumination	T: power symbol / no letter means ordinary type Note: T type is special product, only for round silvery frame; other symbol can be customized
△	Color	R: red / G: green / Y: yellow / B: blue / W: white/ N: black
▲	Voltage	6V / 12V / 24V / 220V / other voltage can be customized(AC/DC LED, internal resistor)
※	Protection Degree	No letter means IP40 / P:IP65

Type specification of knob and key knob: LAS1-A ☆ ★ □ ■ / ◇ ◆ ● / △ / ▲ / ※


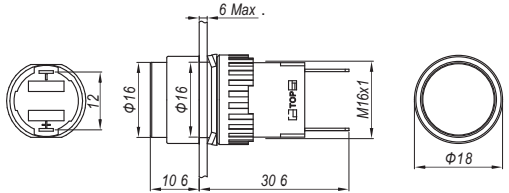

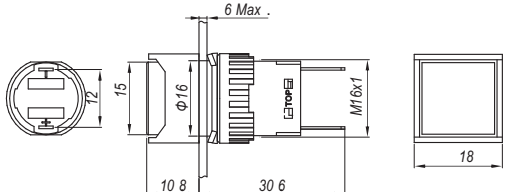

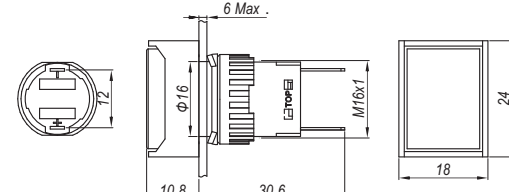

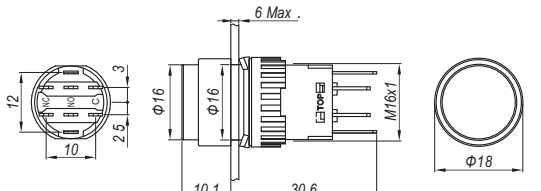

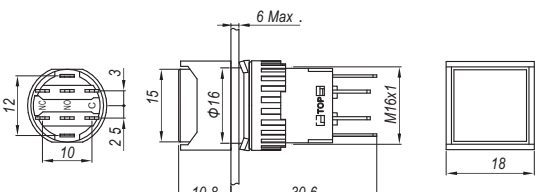

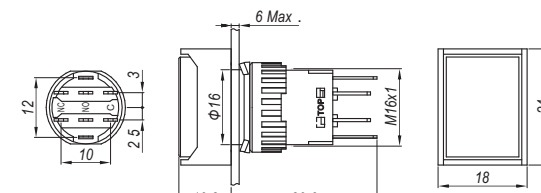
Symbol	Symbol Name	Specify
☆	Sort Code	P: standard frame (Φ22mm) / W: silvery frame(Φ22mm) / no letter means ordinary type
★	Head Shape	Y: round / F: square / J: rectangular
□	Contact	11:1NO1NC / 22:2NO2NC
■	Operation Type	X: selector switch / Y: key-lock switch
◇	Operation Position	2: two position / 3: three position
◆	Action Type	1:maintain / 3:return
●	Unmovable Position of Key	A:  B:  C:  D:  E:  G:  H: 
△	Color	R:red / G:green / Y:yellow / B:blue / W:white / N:black
▲	Voltage	6V / 12V / 24V / 220V / other voltage can be customized(AC/DC LED, internal resistor)
※	Protection Degree	No letter means IP40 / P: IP65

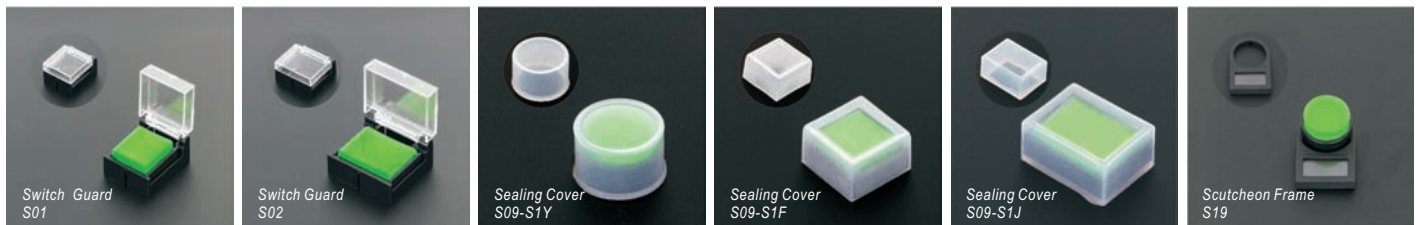
Type specification of emergency stop button: LAS1-A ☆ Y □ ■ / ※

Symbol	Symbol Name	Specify
☆	Sort Code	P: standard frame (Φ22mm) / no letter means ordinary type
□	Contact	11:1NO1NC / 22:2NO2NC
■	Operation Type	TS:emergency-stop switch / TSB:type B emergency-stop switch
※	Protection Degree	No letter means IP40 / P:IP65


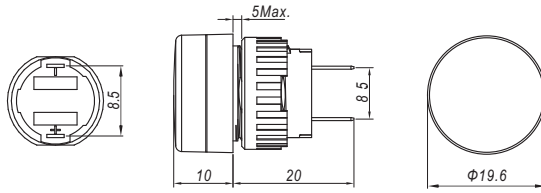

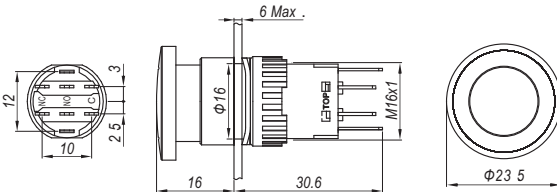

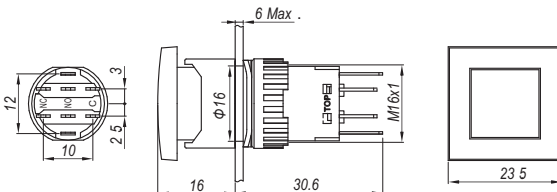

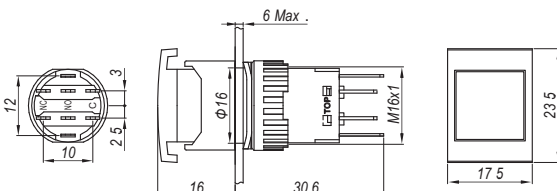

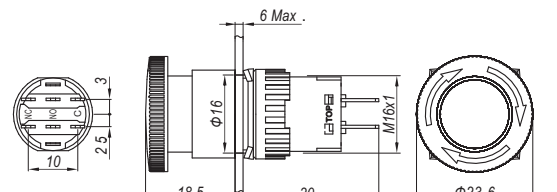

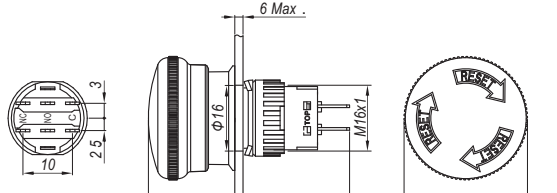
Note: Pls read product specification, then choose corresponding code from above tables according to different symbols.

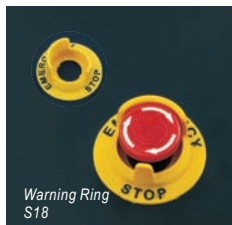
# LAS1-A Pushbutton Switch

Φ16mm Product Outline	Specification	Dimension
 <p>Signal Light LAS1-AY-D/△/▲/※</p>	<p>LED Color△ <b>R G Y B W</b></p> <p>LED Voltage▲ 6V / 12V / 24V / 110V / 220V</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Switch Guard S01 / Scutcheon Frame S19 / Sealing Cover S09-S1Y / Solder Terminal S04 / PCB Terminal S05</p>	
 <p>Signal Light LAS1-AF-D/△/▲/※</p>	<p>LED Color△ <b>R G Y B W</b></p> <p>LED Voltage▲ 6V / 12V / 24V / 110V / 220V</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Switch Guard S01 / Sealing Cover S09-S1F / Solder Terminal S04 / PCB Terminal S05</p>	
 <p>Signal Light LAS1-AJ-D/△/▲/※</p>	<p>LED Color△ <b>R G Y B W</b></p> <p>LED Voltage▲ 6V / 12V / 24V / 110V / 220V</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Switch Guard S02 / Sealing Cover S09-S1J / Solder Terminal S04 / PCB Terminal S05</p>	
 <p>Pushbutton (can be illuminated) LAS1-AY-□ ■/△/▲/※</p>	<p>Contact□ 11: 1NO1NC / 22: 2NO2NC</p> <p>Operation Type No letter means momentary / Z: Latching</p> <p>Color△ <b>R G Y B W N</b></p> <p>LED Voltage▲ 6V / 12V / 24V / 110V / 220V</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Switch Guard S01 / Scutcheon Frame S19 / Sealing Cover S09-S1Y / Solder Terminal S04 / PCB Terminal S05</p>	
 <p>Pushbutton (can be illuminated) LAS1-AF-□ ■/△/▲/※</p>	<p>Contact□ 11: 1NO1NC / 22: 2NO2NC</p> <p>Operation Type No letter means momentary / Z: Latching</p> <p>Color△ <b>R G Y B W N</b></p> <p>LED Voltage▲ 6V / 12V / 24V / 110V / 220V</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Switch Guard S01 / Sealing Cover S09-S1F / Solder Terminal S04 / PCB Terminal S05</p>	
 <p>Pushbutton (can be illuminated) LAS1-AJ-□ ■/△/▲/※</p>	<p>Contact□ 11: 1NO1NC / 22: 2NO2NC</p> <p>Operation Type No letter means momentary / Z: Latching</p> <p>Color△ <b>R G Y B W N</b></p> <p>LED Voltage▲ 6V / 12V / 24V / 110V / 220V</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Switch Guard S02 / Sealing Cover S09-S1J / Solder Terminal S04 / PCB Terminal S05</p>	



# LAS1-A Pushbutton Switch

Φ16mm Product Cutline	Specification	Dimension
 <p>Signal Light LAS1-AY-DS/△/▲/※</p>	<p>LED Color△ <b>R G Y B W</b></p> <p>LED Voltage▲ 6V / 12V / 24V / 110V / 220V</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Switch Guard S01 / Scutcheon Frame S19 / Sealing Cover S09-S1Y</p>	
 <p>Mushroom(can be illuminated) LAS1-AM-□ ■/△/▲/※</p>	<p>Contact□ 11: 1NO1NC / 22: 2NO2NC</p> <p>Operation Type No letter means momentary / Z: Latching</p> <p>Color△ <b>R G</b></p> <p>LED Voltage▲ 6V / 12V / 24V / 110V / 220V</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Solder Terminal S04 / PCB Terminal S05 / Switch Guard T34-16</p>	
 <p>Big Square Pushbutton(can be illuminated) LAS1-ADF-□ ■/△/▲/※</p>	<p>Contact□ 11: 1NO1NC / 22: 2NO2NC</p> <p>Operation Type No letter means momentary / Z: Latching</p> <p>Color△ <b>R G Y</b></p> <p>LED Voltage▲ 6V / 12V / 24V / 110V / 220V</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Solder Terminal S04 / PCB Terminal S05</p>	
 <p>Big Rectangular Pushbutton(can be illuminated) LAS1-ADJ-□ ■/△/▲/※</p>	<p>Contact□ 11: 1NO1NC / 22: 2NO2NC</p> <p>Operation Type No letter means momentary / Z: Latching</p> <p>Color△ <b>R G Y</b></p> <p>LED Voltage▲ 6V / 12V / 24V / 110V / 220V</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Solder Terminal S04 / PCB Terminal S05</p>	
 <p>E-stop Switch LAS1-AY-□ TS/※</p>	<p>Contact□ 11: 1NO1NC / 22: 2NO2NC</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Solder Terminal S04 / PCB Terminal S05 / Warning Ring S18</p>	
 <p>E-stop Switch Type B LAS1-AY-□ TSB/※</p>	<p>Contact□ 11: 1NO1NC / 22: 2NO2NC</p> <p>Protection Degree※ No letter means IP40 / P:IP65</p> <p>Accessory Solder Terminal S04 / PCB Terminal S05 / Switch Guard T34-16</p>	



# LAS1-A Pushbutton Switch

**Φ16mm Product Outline      Specification      Dimension**



Contact □ 11: 1NO1NC / 22: 2NO2NC

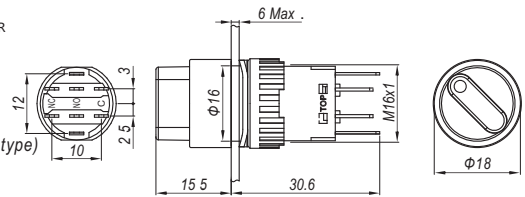
Operation Type ◇◆ L R L R L C R L C R  
21 23 31 33

Color △ R G Y N

LED Voltage ▲ 6V / 12V / 24V / 110V / 220V

Protection Degree ※ No letter means IP40 / P:IP65 (only for maintain type)

Accessory Scutcheon Frame S19 / Solder Terminal S04 / PCB Terminal S05



Contact □ 11: 1NO1NC / 22: 2NO2NC

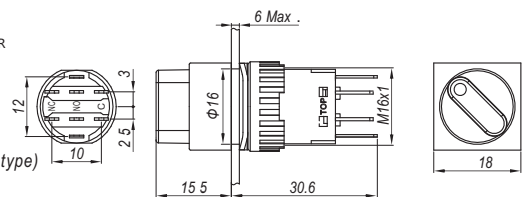
Operation Type ◇◆ L R L R L C R L C R  
21 23 31 33

Color △ R G Y N

LED Voltage ▲ 6V / 12V / 24V / 110V / 220V

Protection Degree ※ No letter means IP40 / P:IP65 (only for maintain type)

Accessory Solder Terminal S04 / PCB Terminal S05



Contact □ 11: 1NO1NC / 22: 2NO2NC

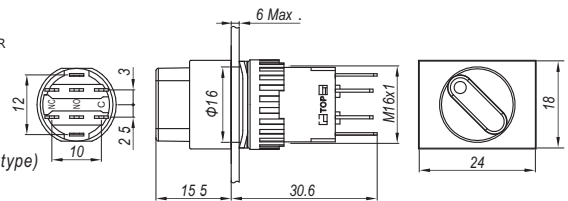
Operation Type ◇◆ L R L R L C R L C R  
21 23 31 33

Color △ R G Y N

LED Voltage ▲ 6V / 12V / 24V / 110V / 220V

Protection Degree ※ No letter means IP40 / P:IP65 (only for maintain type)


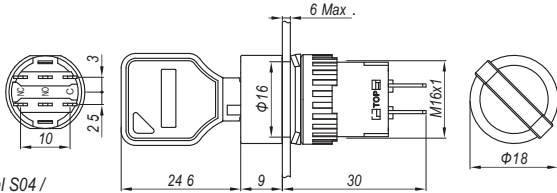

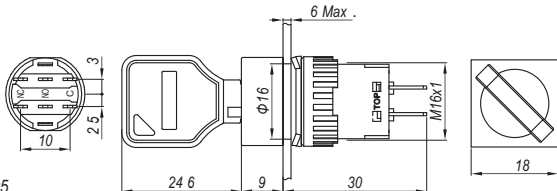

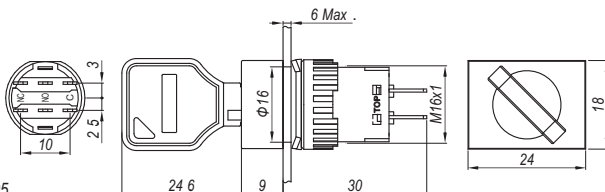
Accessory Solder Terminal S04 / PCB Terminal S05



Contact State of Selector and Key-lock Switch	Switch Type	90° 2 Position		45° 3 Position	
		1NO1NC	2NO2NC	2NO2NC	
↻		NO / NC	left contact NO / right contact NC	left contact NO / right contact NC	left contact NO / right contact NC
↑				left contact NO / right contact NC	left contact NO / right contact NC
↻		NO / NC	left contact NO / right contact NC	left contact NO / right contact NC	left contact NO / right contact NC

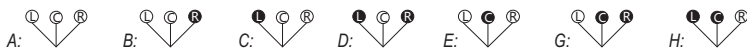





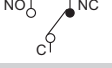
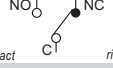
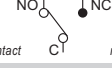
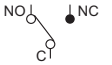
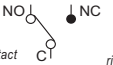
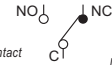



# LAS1-A Pushbutton Switch

Φ16mm Product Cutline	Specification	Dimension
 Key-lock Switch LAS1-AY-□ Y/◇◆●/※	Contact: 11: 1NO1NC / 22: 2NO2NC Operation Position: ◇◆ Unmovable Position of Key: ● Refer to Notes Protection Degree: ※ No letter means IP40 / P:IP65(only for maintain type) <b>Accessory</b> Scutcheon Frame S19 / Solder Terminal S04 / PCB Terminal S05	
 Key-lock Switch LAS1-AF-□ Y/◇◆●/※	Contact: 11: 1NO1NC / 22: 2NO2NC Operation Position: ◇◆ Unmovable Position of Key: ● Refer to Notes Protection Degree: ※ No letter means IP40 / P:IP65(only for maintain type) <b>Accessory</b> Solder Terminal S04 / PCB Terminal S05	
 Key-lock Switch LAS1-AJ-□ Y/◇◆●/※	Contact: 11: 1NO1NC / 22: 2NO2NC Operation Position: ◇◆ Unmovable Position of Key: ● Refer to Notes Protection Degree: ※ No letter means IP40 / P:IP65(only for maintain type) <b>Accessory</b> Solder Terminal S04 / PCB Terminal S05	

Notes


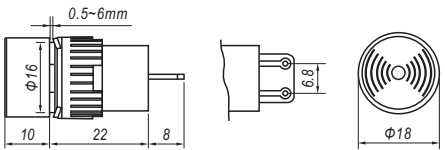

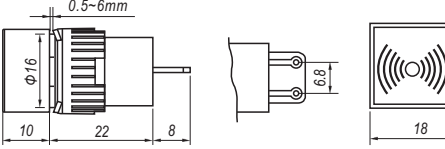

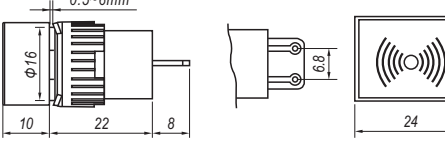
- : Unmovable Position of Key  
No letter means type A
- : Provide 2 keys, need rotate into position when using.



Contact State of Selector and Key-lock Switch	Switch Type / Operation Position	90° 2 Position		45° 3 Position	
		1NO1NC	2NO2NC	2NO2NC	
  	 NO, NC, CT	 left contact, right contact, NO, NC, CT	 left contact, right contact, NO, NC, CT		
	 NO, NC, CT	 left contact, right contact, NO, NC, CT	 left contact, right contact, NO, NC, CT		
	 NO, NC, CT	 left contact, right contact, NO, NC, CT	 left contact, right contact, NO, NC, CT		



# LAS1-A Pushbutton Switch

Φ16mm Product Outline	Specification	Dimension
 <p>Buzzer LAS1-AY-■/▲</p>	<p>Sound Type ■ B: Continuous Buzzer Voltage ▲ 6VDC / 12VDC / 24VDC / 220VAC</p>	
 <p>Buzzer LAS1-AF-■/▲</p>	<p>Sound Type ■ B: Continuous Buzzer Voltage ▲ 6VDC / 12VDC / 24VDC / 220VAC</p>	
 <p>Buzzer LAS1-AJ-■/▲</p>	<p>Sound Type ■ B: Continuous Buzzer Voltage ▲ 6VDC / 12VDC / 24VDC / 220VAC</p>	

## Specification

Operating Temperature	-25°C~+55°C (no freezing), Keep good ventilation round the switch.
Operating Humidity	45~85%RH (no condensation)
Dielectric insulation	1000V
Sound Period	Continuous
Sound Intensity	75dB(1m) (rated voltage)
Sound Frequency	2300±300Hz
Operating Voltage	6VDC; 12VDC; 24VDC; 220VAC

